DOCUMENT RESUME

ED 380 689 CE 068 683

AUTHOR	McKeag, Janis; Todd, Laurie
TITLE	Improving Job Site Skills Project. Preliminary Report. Local 343 United Brotherhood of Carpenters & Joiners of America & Construction Labour Relations Association of Manitoba. Northern Industrial Job Site Visit Report. Environmental Improvement Project, Hudson Bay Mining and Smelting, Flin Flon, Manitoba.
INSTITUTION	Manitoba Dept. of Education and Training, Winnipeg. Literacy and Continuing Education Branch.
SPONS AGENCY	National Literacy Secretariat, Ottawa (Ontario).
PUB DATE	Apr 93
NOTE	29p.; Developed for the Basic Education in the Workplace Steering Committee. For related documents, see CE 068 682-690.
PUB TYPE	Reports - Research/Technical (143) -- Tests/Evaluation Instruments (160)
EDRS PRICE	MF01/PC02 Plus Postage.
DESCRIPTORS	Adult Basic Education; Basic Skills; Building Trades; *Carpentry; Data Collection; Foreign Countries; *Job Skills; Listening Skills; Literacy Education; Mathematics Skills; *Nonverbal Communication; *Numeracy; *Observation; Reading Skills; *Skill Analysis; Verbal Communication
IDENTIFIERS	*Manitoba; Workplace Literacy

ABSTRACT

The Environmental Improvement Project at Hudson Bay Mining and Smelting in Flin Flon, Manitoba, presented a unique opportunity for field observation and assessment. Field observation of the approximately 70 carpenters employed with various companies provided information on the types of communication used and the circumstances in which the different types were used. The work force included certified, noncertified, and apprentice carpenters from the local area, other northern centers, Winnipeg, and southern rural locations, as well as members transferred from other local unions in Saskatchewan. Both direct and comparative observations were made of the job site. Twelve carpenters were interviewed. Safety was a crucial area and placed additional demands on the reading, writing, mathematics, and communication skills of all levels of carpenters. Foremen read instructions and notices every day and also read tables, charts, diagrams, and blueprints. Carpenters' on-the-job reading focused on safety warnings. Writing was the domain of foremen. Hand signals were an important communication skill. Talking and listening on the job were the major form of communication. Math job skills included measuring, estimation, and addition and subtraction. Tape measure, framing square, and sliding t-squares were essential math-based tools. Carpenters were responsible for the safety of others. (Appendixes include a workplace literacy skill observation grid, interview form, and glossary.) (YLB)

ED 380 689

IMPROVING JOB SITE SKILLS PROJECT

Preliminary Report

Local 343
United Brotherhood of Carpenters & Joiners of America
&
Construction Labour Relations Association - Manitoba

Northern Industrial Job Site Visit Report

Environmental Improvement Project
Hudson Bay Mining and Smelting, Flin Flon, Manitoba

by

Janis McKeag - Workplace Literacy Consultant
Laurie Todd - CTITF Training Coordinator '93

for

Manitoba Basic Education in the Workplace Steering Committee

April 1993

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☐ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

S Howell

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

CE 068 683

Basic Education in the Workplace
Steering Committee 505-138 Portage Avenue East, Winnipeg, Manitoba R3C 0A1

ACKNOWLEDGMENTS

Members of the Basic Education in the Workplace Steering Committee (BEWSC): Rob Despins, Al Bischoff, Greg Maruca, Pat Moore and Sue Turner would like to thank the National Literacy Secretariat of Multiculturalism and Citizenship Canada for their financial assistance. In particular, we would like to express thanks to Brigid Hayes, Program Consultant with the National Literacy Secretariat.

The BEWSC would also like to thank the Manitoba Government for providing coordination for this project through the Manitoba Literacy Office, a branch of the Department of Education and Training.

LIMITATION OF STUDY

All data collected and analyzed for this report is from the job site visit to Flin Flon. The results presented in this report are therefore limited to this particular job site in Northern Manitoba and may not be generalizable to other areas.

TABLE OF CONTENTS

INTRODUCTION 1
JOB SITE VISIT 3
JOB SITE OBSERVATIONS 4
ON SITE CARPENTER INTERVIEWS 7
- Background 7
- Main Types of Job Activities 7
- Job Tools 8
- Safety 8
- Reading for the Job 9
- Reading Tables, Charts, Diagrams, Blueprints 9
- Writing 9
- Making Diagrams and Sketches 10
- Hand Signals 10
- Talking and Listening on the Job 10
- Difficulties in Understanding and Being Understood 11
- Other Sources of Information 11
- Math for the Job 11
- Math Tools 12
- Supervision 12
- Order of Work 12
- Responsible for the Safety of Others 12
- Responsibility for Equipment and Tools 13
- People Work With 13
- Qualifications Needed to be a Carpenter 13
- Training Suggestions 14
- Other Comments and Points 15

WORKPLACE LITERACY SKILLS 17
POSITIVE IMPACTS 18
APPENDICES
- Workplace Literacy Skill Observation Grid 21
- Structured Job Interview Form 22
- Glossary 24

INTRODUCTION

Job site observations were identified as an important component of the Manitoba project *Improving Job Site Skills* , sponsored by Local 343 of the United Brotherhood and Joiners of America and the Manitoba Construction Labour Relations Association. While important data is gathered through the mail-out questionnaire, field observations provide information on the types of communication used [written, verbal, non-verbal, schematic, body-language etc.] and the circumstances in which the different types of communication are used.

The *Environmental Improvement Project* at Hudson Bay Mining and Smelting in Flin Flon presented a unique opportunity for field observation and assessment for a number of reasons. First, it provided a convenient location where field interviews and observations of northern members of the local could be conducted for this study. Second, the location of this major construction, within the confines of a large operational place, required members to become quickly familiar with the host or existing communication system as well as unfamiliar hazards. This setting imposed additional importance on effective communication for this job setting. Third, the organization of the construction work by a project management team (Fluor Daniel Wright) and numerous sub-contractors undertaking specific portions of the environmental improvement work placed additional demands on a variety of communication skills. Fourth, the fact that portions of the contract work was done on a cost-plus basis placed special demands on written communication skills for some of the carpenters. Finally, the project represented the largest workforce of members at one Manitoba site at the time, with approximately seventy (70) carpenters employed with various companies.

Initial permission to visit the Flin Flon site was made through Mr. Bill Snowdy of Fluor Daniel Wright, the project managers, and representatives of Hudson Bay Mining and Smelting. Although members of the local were employed by several contractors, it was decided to contact the three largest employers of member carpenters: Canadian Energy Services (32), NorthWest (11) and La Furlane Construction (3). The workforce included certified, non-certified and apprentice carpenters. The individuals come form the immediate local area of the project, other northern centers, Winnipeg, and southern rural locations, as well as members transferred in from other local unions in Saskatchewan. The field observations were conducted on March 24-26, 1993.

JOB SITE VISIT

Upon arrival at Hudson Bay Mining and Smelting, the first contact was made with Bill Snowdy of Fluor Daniel Wright. Initial contact with the project management company included a safety orientation session to familiarize the coordinator and consultant observation team with the site safety requirements, existing warning systems, and general work requirements on the project. This orientation was a scaled down version of the safety orientation session that all workers must attend prior to starting work on site.

The first contractor the observation team met with was Canadian Energy Services (CES). This company employed carpenters for both civil works (forming, timber construction, etc.) and scaffold erection for other trades. After a meeting with Superintendent John Gazankas, the team met with general foreman Dave Milton, foremen Del Turner (scaffolding) and Forrest Scheer (civil), and job steward Dave Smith. After extensive discussions, on-site observations were conducted throughout the plant where CES crews were working. Site directions and guidance to civil crews were provided by Dave Smith. Del Turner guided additional tours to scaffold erection crews.

The NorthWest management contact was civil construction manager Bill Traviss. The site observation tour was conducted by foreman Bernie Myszcsyszyn. The work being done by this company's crews entailed civil work only. The management contact for La Furlane was foreman Frank Groening, their site remaining work was civil. Interviews were conducted with each of these foremen.

JOB SITE OBSERVATIONS

This section presents the observations made by the coordinator/consultant team of Laurie Todd and Janis McKeag. These observations are both direct and comparative. They are not ranked in order of importance.

- This was an industrial job not common in Manitoba. It required a different variety of skills, that many members have not had the opportunity to use in traditional commercial and residential construction sites in the province.

- This was the first major job using tube and clamp scaffolding, which placed new demands on the membership skill inventory. It also required greater demands for reading and tag completion.

- The carpenters were working in a hazardous environment new to them; e.g. acid baths, toxic fumes, heat stress, working over vats of toxic chemicals etc.

- Because this was a job within an on-going complex industrial setting, that presented new and unfamiliar hazards, there were additional communication demands to met the complexity of this job. These included primarily verbal and reading communication skills.

- The on-site signage, warning systems/emergency procedures were at a higher, more demanding level than normally seen on construction sites in Manitoba.

- For carpenters, safety notes and memos from the office are posted in on site trailers, read out loud at tool box meetings, and they must sign acknowledging that they have read the safety notices.

- The above factors placed higher reading demands on the carpenters for safety regulations, increased clear oral communication skills, intensive participation in safety meetings on a daily basis, and the reading of safety reports and warnings.

- There were communication barriers due to the fact that the carpenters were working for a company whose superintendents came from a pipefitter background. This created a problem in understanding the different demands imposed by different trade materials and methods

- Due to the work being 'as built'*, carpenters did not get definite plans, such as blueprints, elevations, and had to change design/construction after the fact. This place higher demands on communication skills between the foremen and the crew.

- As this was an 'as built' situation, planning work was difficult. For the most part, drawings and sketches (a main form of visual communication for carpenters) were not available as on traditional sites, because the work had to be done around and within the confines of the existing structures and around the confines of the safety of the structures. For example, scaffolding could not be built traditionally from the ground up it had to be hung from trusses. Trestles were constructed without definite elevation of pipes, nor were exact locations of pipe runs always known.

- There was a high demand placed on oral communication skills of foremen over CB radios. This necessitated selective listening skills to identify the calls that were for them and also to be able to pick up information that might relate to their jobs.

- Partnership, teamwork, the need to anticipate partners work, and the ability to be clear in understanding what the partner wants/needs are essential communication skills for carpenters.

- Working under adverse conditions placed higher demands on communication skills such as being able to read body language, being aware of other working hazards, and speaking through respirators, and wearing ear protection.

- Being able to effectively communicate in a non-verbal manner is an important workplace skill that leads to improved efficiency and safety. When a team is working in tandem, it is like a ballet of fluid movement.

- Due to the complex contractor/subcontractor relationships on this project, there was added administration work for supervisors and workers. The carpenter foremen estimated that 40-50% of their time was devoted to paper work such as time sheets, deviation sheets, safety reports, job site diaries and the use of calculations to complete required forms.

- This job demanded a high degree of 'common sense'* to use past experience and knowledge and apply them to this work situation. Workers had to adapt and use their skills in many unusual and atypical situations.

- This job required a high degree of problem solving ability and flexibly and adaptability due to the "as built" situation. Often, foremen* would be required to make a drawing to reflect what was built and then have to take it to the engineering office to have an official drawing made.

- Trade terminology and tool names could differ depending on training background: e.g. slope/pitch; skilsaw/circular saw.

* see glossary for explanation

ON SITE CARPENTER INTERVIEWS

This section presents the summary of information gathered from interviews with carpenters on site. These interviews were conducted to assess the carpenters' perceptions of the workplace literacy skills needed on the job site and to asses the carpenters' perception of the need for training.

The form used to guide interviews may be found in Appendix B. It was adapted from the Structured Job Analysis Interview form used in literacy task analysis of carpenters by the BC Construction Industry Skills Improvement Council.

Background

Twelve carpenters were interviewed. The breakdown of the participants was: 8 certified carpenters, 4 non-certified carpenters, 6 from northern areas, 2 from southern rural locations and 3 from Winnipeg.

Overall the average time in the trade was 15 years, with a range of 5 to 30 years.

Main Types of Job Activities

The job activities fell into two categories, civil and scaffolding.
Civil carpentry included: forming, layout, framing, and wood trestle construction.
The scaffolding was tube and clamp.

Job Tools

Depending on the job and the work to be performed, appropriate tools were used on a daily basis and were considered essential for the job.

Hand Tools:
Hammer, sliding T-square, pencil, framing square, elevation lines, hand level, string line, hand saws, crowbars, brace and bit, and screwdrivers.

Portable Power Tools:
Circular saws, drill, grinders, metal bits and high speed wood bits.

Special Safety Equipment:
Safety harness with lanyard, life lines, respirators, hearing protection, plastic overall suits, hygiene practices.

Safety

This was a crucial area and placed additional demands on the reading, writing, mathematics and communication skills of all levels of carpenters. The site had several sources of safety notices and signage systems. Safety notices were posted around the site, and often almost hidden as they were located in out of the way places so as not to impede the operation of machines. Often they were difficult to read because they were covered in dirt caused by plant operation.

Another factor adding to the increased safety reading demands was the superimposition on the 'host' (HBM&S) safety warnings of the signage posted by the project management and other individual contractors. This meant that foremen not only had to be aware of their own company's system, but all of the others' as well.

Reading For The Job.

Foremen

Reading instructions, notices, etc., was done every day and they were deemed important for the ordering and carrying out of the work. This job demanded much more than typical supervisory reading/administration skills.

Carpenters

On the job reading focused on safety warnings, and scaffold tag out system, in plant hazardous work area warning systems, controlled access area systems rather than on traditional areas such as blueprints.

Reading Tables, Charts, Diagrams, Blueprints

The foremen had more responsibility for this. Part of this was due to the fact that it was an 'as built' job, where plans were drawn up after the work was done. Foremen would interpret the engineers blueprints and drawings for the carpenters and make sketches for them. It was an on-going task.

Other charts included time loss accident charts, production schedules and calendars.

Writing

This was the domain of foremen who had to write deviation reports, complete time sheets, field material requisition forms, epoxy resin and pre-concrete inspection sheets, etc. It was estimated that paperwork occupied about 40-50% of supervisors' time. It had to be completed on a daily basis and was an essential job duty.

All foremen or group leaders carried note pads in their pockets to make notes. All scaffolding had to be tagged for use, non-use and regular re-inspection. This was the responsibility of the foremen.

Making Diagrams And Sketches.

This was the domain of group/crew leaders or foremen. It was done at least three times a week.

Hand Signals

This was an important communication skill as the working conditions often prevented direct oral communication. It required that partners become familiar with each other's body language.

Talking And Listening On The Job

This was the major form of communication. Giving directions, asking questions occurred frequently on a daily basis.

All crew leaders and foremen were equipped with CB radios so they were in touch with the crews, and with the office. They needed to clarify points and receive directions. They then had to impart these to the rest of the carpenters. This was a major function of their work.

Both civil carpenters and scaffolders had to listen to the directions of crew leaders and ask questions. The need to do this was intensified by the fact that there were no plans to follow.

Difficulties In Experiencing Understanding And Being Understood.

Many of the difficulties in being understood stemmed from the fact that the companies for whom the carpenters worked were not carpentry firms. This led to misunderstandings as to what work could be done based on different properties of different materials and layouts.

Other difficulties stemmed from the protective equipment that had to be worn.

No-one identified ESL as an issue.

Other Sources Of Information

Participants identified common sense coming from the experience of having practiced carpentry skill over the years.

Information also came form other trades working in the same area.

Math For The Job

Measuring was an essential job skill. Accuracy was crucial. Estimating alignment (eyeballing) was used, especially when there were no plans. Estimation was also used for time to complete the job and for the required materials.

Addition and subtraction were usually done in the head, but quick written calculations to ensure accuracy were done. These calculations were often performed on scrap wood or other handy pieces of scrap material.

Math Tools.

Math based tools were seen as just as part of the job and were not perceived as math tools. These tools were essential for performance of job duties and tasks and were used daily.

Common Math Tools
- Tape Measure
- Framing Square
- Sliding t-Squares

Supervision

Foremen supervise the crew and crew leaders. The crew leaders supervise their crew. It depends on the job and position.

Order Of Work

This depended on the job and the demands. Sometimes it was imposed by the arrival/non-arrival of equipment or material or the amount of work that had been completed by another trade group.

Responsible For The Safety Of Others

This was a resounding yes. The participants were adamant that they did not want to work with others who did not take this aspect of work seriously. In this situation, your life could depend on others. Safety involved ensuring footing, wearing harnesses, respirators, hearing protection, protective coveralls, talking to partners.

Responsibility For Equipment And Tools

Each carpenter was responsible for their own tools. Company tools or bits had to be signed out and returned to the tool crib at the end of every shift.

People Work With

Usually carpenters worked in pairs. They may be supervised by and work with a foreman.

Crews of 7-8 were also involved in this job, particularly for the scaffolders.

Carpenters had to work with and along side of pipefitters, engineers, surveyors, welders, boiler makers -- all the other trades on this job.

Qualifications Needed To Be A Carpenter.

- Willingness to learn and a strong back was qualification identified by all carpenters.
- Scaffolders stated they needed a course/module in tube and clamp procedures.
- Certification (having journey ticket) was recommended, particularly by those who had their tickets.
- All stated that more education/schooling or upgrading was needed.
- Improvement of vocational/ apprenticeship courses to reflect the changing workplace was recommended.
- Completion of math at a Grade 10 level was recommended, although the younger carpenters (under 40) recommended that at least Grade 11 be required.
- Most suggested that everyone should try to finish high school.

Training Suggestions

◆ Training should be developed and offered throughout the province by the union.

◆ Course suggestions:

Hoisting/ Rigging
Scaffolding
WHMIS
Insulation/Vapor Barrier
Asbestos Removal
Form Work/Hardware e.g. Types of Snap-Ties, Wedge Work, Slip Forming etc.
Grout And Epoxy Resins
Caulking
Interpersonal Skills e.g. Supervisory Foreman Course, Teaching Techniques, Constructive Criticism, Communication Courses
Layout And Blueprint Reading Course

◆ There is need to make sure that the "old skills" such as heavy timber construction are not lost. Training modules could be developed to capture these skills and then used by members.

Other Comments and Points

In this section, the comments added in the open-ended of the interview form are presented. The order of presentation is from the most frequent comment to the least frequent comment.

- There was a high demand from the members about the need for on-going training and upgrading in the trade.
- There was an expressed interest in the need for more/compulsory certification of the trade similar to electrician and plumbers.
- There was a perception of lack of coordination between the trades and of what is needed to carry out the jobs.
- There was a problem in adapting written forms from another trade to reflect the reality of the carpentry trade.
- Members expressed concerns and the need for a review of apprenticeship in Manitoba to recognize and upgrade the program to keep up with changing technology/ work practices, techniques and changing safety standards.
- There was an expressed concern that differences in apprenticeship practices, programming, skill levels, and the difference of the skills from different provinces, contributed to the lack of continuity, consistency and transferability of skills.
- There is a need to assure that apprentices are well rounded in a variety of areas and posses the necessary skills for the trades.
- It was suggested that a system of log books or recording of skill/ experience be developed.

- There was a need to emphasize that communication is a two-way street and the importance of developing listening skills and verbal skills

- There was a need to develop a method/ways of ensuring that competencies are transferred by rotating job duties, and role reversals.

- There is a need to have some training on how to teach/share /pass on knowledge and skills, not just to apprentices but to others in the field. This includes having sensitivity to differences in learning styles, age, gender, ethnic background.

- Carpenters stated that foremen at a particular company were good communicators, they took the time to explain, the work and the situation.

- It was suggested the feasibility of demanding entry level requirements (skill identification and competency) to join the union: possibly similar to the requirement to write the Trades Qualification exams be explored.

WORKPLACE LITERACY SKILLS

A Workplace Literacy Skills Observation Grid (Appendix A) was designed to summarize the job site communication skills. CF indicates Carpenter Foreman; C indicates Carpenter. A shaded box indicates the skill was used on this job site.

Common/Frequent Reading Tasks
- On Site Signage
- WHMIS Symbols and Information Sheets
- Scaffolding Tags
- Sketches
- Safety Instructions

Common/Frequent Math Skills
- Measuring in Inches
- Calculating Angles,Slopes, Heights, Spans and Loading Requirements
- Layout

Common /Frequent Math Tools & Operation
- Framing Square
- Tape Measure
- Level
- Sliding T Square
- Circular Saw - depth of cut, angles
- Drills - bit sizes, depth
- Elevation and Grid Lines

Common/Frequent Communication Skills
- Listening to and following directions
- Abiltiy to understánd body language
- Understand and use hand signals
- Form completion
- Abiltiy to prioritize the work
- Give instructions
- Use CB radios.

POSITIVE IMPACTS

This section reflects the informal assessment used by the observation team to evaluate the effectiveness of this visit. The material was gathered through casual conversations, formal statements, and perceptions of the team. These statements are not ranked in order.

- Workers are interested in explaining their skills.

- The carpenters liked knowing that this is not a "suit" survey and that the observation took place in their actual working conditions. This reinforced the idea that reading, writing, etc., takes place on the job.

- There was increased awareness of workplace literacy skills, e.g., realizing that completing and reading scaffolding tags is reading and writing skills but that they are just seen as part of the job so they are not noticed as being separate academic skills.

- The carpenters were able to express their pride displayed in the skills they possess and in their trade.

- There was expressed appreciation that the project focused on practical academics built in into the job.

- The members liked the feeling that someone cared about them and cared about their ideas.

- The members also felt it was important that the union was interested in getting their viewpoint on training. They liked the direct contact in the field to talk bout training

- The process was seen as a positive proactive approach. The project was being conducted while members working, so that it was a not seen "fix it" solution during time of unemployment.

- It was appreciated, that participation was not imposed. It was voluntary and on company time, the participants did not have to give up their lunch hour or coffee breaks.

- It was also appreciated that the observation team took the time to explain the purpose of the survey and answer questions.

- By conducting work on site, the survey became real for the carpenters. It reflected the actuality of the work and the working conditions. This reinforced the idea that workplace literacy skills must be seen in context and that they are not just book learning.

- The willingness of the consultant to get dirty and interact with the carpenters on their turf was a crucial factor in developing a rapport to obtain honest answers.

- The familiarity of the consultant with the trade language and the workplace culture was important. By being able to use common trade terminology without having to having to explain or clean up their language, the carpenters were able to be candid and they could use their own trade language.

- The team was accepted by the tour leaders, and were fully integrated into the work culture, no barriers, so much so, that they tried to take the female consultant through the men's shower/ change room.

- It was important that a union representative was present to make the liaison between management and the work force.

- It was appreciated that the team came up to listen. There was no hidden agenda, and the carpenters were given the chance to speak their minds.

- The direction of the interviews was lead by the workers. The consultant started them talking with specific questions based on the work they were performing at that moment.

- Access given by the contractors and their full cooperation, was paramount for successful field observation.

- Talking to all level of management and with the workers served to reinforce the concept that workplace literacy skills are everybody's business. All parties have as vested interest in improving the skill base of tradespeople.

WORKPLACE LITERACY SKILLS OBSERVATION GRID

Reading	CF	C
Match Letters		
Recognize Symbols		
Recognize Abbreviations		
Recognize Jargon		
Recognize Technical Language		
Use Charts/Tables/Graphs		
Use Drawings/Sketches		
Use Blueprints		
Obtain from:		
- Code Books		
- Job Sheets		
- Printouts		
- Other		
Read Memos/Notes		
Read Manuals		
Read Directions		
Locate Information		
Site Safety Signage		

Math	CF	C
Date/Time		
Count Numbers (Quantity)		
Match Numbers		
Add/Subtract Numbers		
Add/Subtract Fractions		
Add/Subtract Decimals		
Multiply/Divide Numbers		
Multiply/Divide Fractions		
Multiply/Divide Decimals		
Convert Fractions & Decimals		
Measure Imperial		
Measure Metric		
Estimate		
Area		
Perimeter		
Slope/Pitch		
Volume		
Weight/Load		

Communication	CF	C
Complete Forms		
Write Safety Reports		
Complete Time Cards		
Write Memos/Notes		
Write Work Orders		
Record Duties		
Keep Track of Hours		
Take Messages		
Give Directions		
Follow Directions		
Ask Questions		
Speak Face to Face		
Speak over Radio/Telephone		
Work with Other Trades		
Hand Signals		
Warning Systems		
Body Language		

CF = Carpenter Foreman
C = Carpenter

Appendix B

STRUCTURED JOB INTERVIEW - CARPENTERS

Name: _____

Employed:_____ Unemployed: ____ Certified _____ Level _____

1. Main Type of Carpentry Work.

2. How long have you been working in this field ? _____

3. a) What are your main activities. (when you are working)

Framing _____	Forming _____	Roofing _____	Layout _____
Finishing _____	Drywalling _____	Cabinet Making	_____
Scaffolding ____	Insulation _____	Instrument Work e.g. Survey Levels ____	

b) What amount of time do spend on each on these duties.

4. a) What tools and equipment do you use?
Hand Tools e.g. Hammer, Plumb Bob, Hand Level, Pencil, Tape, Chisel, etc.
Portable Power Tools: Drill, Skill Saw, Saber Saw, etc.
Stationary Power Tools e.g. Table or Radial Arm Saw

b) How often do you use them?

5. a) What kind of reading do you do for the job? e.g. notes, instructions, blueprints, etc.
b) How often do you do it?
c) How important is it to your work?

6. Do you read safety notices, or bulletin boards on the job site?

7. a) What writing do you do for your job, e.g. memos, time cards, forms, etc. ?
b) How often do you write things?
c) How important is this to your work?

8. a) Do you use things like figures, table, charts, graphs, diagrams, blueprints, drawings, or sketches etc.?
b) How often do you use them?
c) How important are they to your work?

9. a) What math do you have to do for your job?
Addition, Subtraction, Estimating, Measuring
b) How often do you do it?
c) How important is it to your work?

Appendix B

10 a) Do you use math tools for in your work? e.g. Tape measure, Framing Square, etc.
b) How often do you use them?
c) How important are they to your work?

11. a) Do you have to make diagrams, blueprints, sketches or drawings in your work?
b) How often do you do this?
c) Why do you do this?

12. What other sources of information do you use in your work?

13. a)What qualifications do you need for this job?
b) What level of education is needed for this job?
c) What experience is required for this job?

14. a) How much supervision do you receive?
b) Do you ever supervise others?

15. How do you decided the order in which to carry out your work?

16. a) Are you responsible for the safety of others?
b) What does this involve?

17. a) What sorts of equipment, material, tools are you responsible for?
b) What does this involve?

18. How many people do you usually work with?
b) Do you work with other trades ?

19. Do you use hand signals to communicate on the job? e.g. To Crane Operators.

20 What kind of talking do you do on the job? e.g. give directions, ask questions etc.?
b) How often do you do it?
c) How important is it to your work?

21. What kind of listening do you do on the job? e.g. directions.
b) How often do you do it?
c) How important is it to your work?

22. Do you ever experience any difficulty in understanding what is being said? Example

23. Do you ever experience any difficulty in making yourself understood.? Example

24. Do you experience any problems with Imperial and Metric Measurement?
Please explain.

25. What courses do you think should be offered through the union or by employers?

26. Do you have any questions, comments or points you would like to add?

Appendix C

GLOSSARY

As Built	This term is used to describe a job site where the work is completed first and plans are drawn after the fact to match the work.
Certifed	This term indiates the person possess a provincial or interprovincial journey ticket.
Common Sense	Common sense knowledge includes the ability to understand and physically and visually interact with real things and situations based on sensory experience with the tools, equipment, processes and materials of a trade. (Pucel, 1992).
Foreman	The term is used to describe a person who carries out supervisory work. It refers to both male and female personnel. It is used in this report as it is the most common trade term and there has been no satisfactory gender neutral term developed which adequately reflects the position. The terms, group leader, lead hand, crew leader or supervisor, do not reflect the duties and have other meanings in this job classification.